

What is claimed is:

1 *Sub* 1. A method for efficient bulk package delivery for recipients comprising:  
2 *ET* delivering said packages in bulk for a plurality of recipients in a single delivery stop to a  
3 destination centralized pickup location; and  
4 loading said bulk delivered packages randomly into an automated system of  
5 storage locker bins.

1 2. The method according to claim 1, wherein said step of delivering of packages in  
2 bulk for a plurality of recipients further comprises, delivering at least one item destined for a  
3 recipient.

1 3. The method according to claim 2, wherein the step of delivering said packages in  
2 bulk comprises, sorting at an origination regional distribution center (RDC) location items  
3 received from a plurality of retailers delivered to said origination RDC location, said items  
4 destined for a plurality of said recipients, said items organized by a common item identifier.

1 4. The method according to claim 3, wherein the step of sorting said received items  
2 at said origination RDC location further comprises:  
3 identifying said received items to at least one of a destination centralized pickup  
4 location and a destination local distribution hub;  
5 identifying said received items to a destination RDC; and  
6 sorting and grouping said identified received items by said identified destination RDC,  
7 said identified received items organized by a common item identifier.

5. The method according to claim 4, wherein the step of delivering said packages in bulk comprises:

transporting said sorted and grouped items to said identified destination RDC;

sorting at said destination RDC said transported items by said one of a destination centralized pickup location and a destination local distribution hub,

creating at said destination RDC, said bulk delivered package by organizing said sorted items for a specific request, said sorted items being sorted by one of said destination centralized pickup location and said destination local distribution hub; and

transporting in bulk said created bulk delivered package having said items organized for a specific recipient, to one of said destination centralized pickup location and said destination local distribution hub.

6. The method according to claim 5, wherein the step of creating said bulk delivered package at said destination RDC location further comprises, locating items destined to a specific recipient from items organized by said common item identifier.

7. The method according to claim 6, further comprising consolidating more than one of said located items originating from said plurality of retailers, destined to said specific recipient.

8. The method according to claim 7, further comprising receiving said located items associated with a single order from at least one fulfillment location, said fulfillment location being at least one of a retailer, a manufacturer, a merchant and a supplier.

9. The method according to claim 1, wherein the step of randomly loading said bulk delivered package into an automated system of storage locker bins further comprises: capturing electronically, an identifier for said bulk delivered package; and

4 associating said electronically captured identifier of said bulk delivered package with an  
5 electronically captured identifier of one of said storage locker bins within said automated system  
6 of storage locker bins.

1 10. The method according to claim 9, further comprising, retrieving said bulk  
2 delivered package created for said specific recipient from a storage locker bin, said retrieving  
3 step including authenticating an identity of said recipient prior to at least one of revealing an  
4 identity of said storage locker bin and providing access to said storage locker bin.

1 11. The method according to claim 2, further comprising:  
2 creating a returns package consisting of at least one item from at least one of a bulk  
3 delivered package retrieved by a recipient and a package delivered to a customer specified  
4 address, said returns package destined for a retailer associated with said at least one item; and  
5 delivering in bulk, sorted and grouped created returns package to returns facility of said  
6 associated retailer.

1 12. The method according to claim 11, further comprising submitting said returns  
2 package for pickup at a destination centralized pickup location.

1 13. The method according to claim 2, further comprising:  
2 creating a returns package consisting of at least one item from at least one of a bulk  
3 delivered package retrieved by a recipient and a package delivered to a customer specified  
4 address, said returns package destined for a retailer associated with said at least one item;  
5 identifying a returns facility identifier and a returns local market identifier for said  
6 returns package based upon an identifier of said retailer;  
7 identifying a RDC identifier associated with said returns local market identifier;  
8 submitting said returns package for pickup at a destination centralized pickup location;

transporting said submitted returns package from said destination centralized pickup location of returns package submission to a destination RDC associated with said destination centralized pickup location of returns package submission;

sorting and grouping at said associated destination RDC said transported returns package by said identified RDC identifier associated with said returns local market identifier for bulk delivery to an origination RDC associated with said identified RDC identifier;

transporting said sorted and grouped returns package from said associated destination RDC to said associated origination RDC;

sorting at said associated origination RDC said transported returns package by said identified returns local market identifier of said returns package;

sorting and grouping at said associated origination RDC said sorted returns package by said identified returns facility identifier of said sorted returns package for bulk delivery to a returns facility associated with said associated returns facility identifier; and

delivering in bulk said sorted and grouped returns package to said associated returns facility.

14. The method according to claim 1, wherein the step of randomly loading said bulk delivered package into an automated system of storage locker bins comprises, automatically triggering the dispatch of an electronic notification to said recipient of said bulk delivered package, said electronic notification having at least an identifier of said destination centralized pickup location.

15. The method according to claim 14, wherein said step of automatically triggering the dispatch of said electronic notification further comprises, recording information necessary for billing at least one of a customer who ordered an item of said bulk delivered package, said recipient and a retailer, said information including at least one of an order identifier, an ordering customer identifier, a recipient identifier, a customer identifier, a package identifier, a delivery

6 date, a delivery time, a delivery notification date, a delivery notification time, a retrieval date and  
7 a retrieval time.

1 16. The method according to claim 14, wherein said electronic notification to said  
2 recipient comprises, at least one of a facsimile, an email, a telephone call, and a page.

1 17. The method according to claim 1, further comprising retrieving said bulk  
2 delivered package by said recipient through self-service.

1 18. The method according to claim 1, wherein the step of loading said bulk delivered  
2 package randomly into said automated system of storage locker bins further comprises, loading  
3 said bulk delivered package into any unoccupied storage locker bin within said automated system  
4 of storage locker bins, said automated system of storage locker bins having dimensions large  
5 enough to accept said bulk delivered package, said automated system of storage locker bins being  
6 configurable.

1 19. The method according to claim 1, further comprising controlling a temperature  
2 within said bins of said automated system of storage locker bins by locating said bins in a  
3 temperature controlled environment.

1 20. The method according to claim 1, wherein said step of delivering said package in  
2 bulk to said destination centralized pickup location further comprises, accommodating delivery  
3 of said package in bulk to said destination centralized pickup location from a plurality of  
4 different shippers.

1 21. The method according to claim 1, wherein said step of loading said bulk delivered  
2 package randomly into said automated system of storage locker bins further comprises,

3 accommodating loading of said bulk delivered package into said automated system of storage  
4 locker bins from a plurality of different shippers.

1 22. The method according to claim 1, wherein said step of delivering said package in  
2 bulk to said destination centralized pickup location further comprises creating said bulk delivered  
3 package at a retailer fulfillment site, said bulk delivered package containing at least one ordered  
4 item organized for a specific recipient.

1 23. The method according to claim 22, further comprising:  
2 determining one of a specified destination centralized pickup location and a destination  
3 local distribution hub for bulk delivery of said bulk delivered package;  
4 determining a destination RDC for said bulk delivered package;  
5 transporting said bulk delivered package from said retailer fulfillment site to an  
6 origination RDC;  
7 sorting and grouping at said origination RDC said transported bulk delivered package  
8 by said determined destination RDC;  
9 transporting said bulk delivered package from said origination RDC to said determined  
10 destination RDC;  
11 sorting and grouping for bulk delivery at said determined destination RDC said  
12 transported bulk delivered package by said determined one of said specified pickup location and  
13 said local distribution hub; and  
14 delivering said bulk delivered package in bulk from said determined destination RDC to  
15 said determined one of said specified pickup location and said local distribution hub.

1           24. The method according to claim 1, wherein said step of delivering said bulk  
2 The method according to claim 1, wherein said step of delivering said bulk delivered package to  
3 said destination centralized pickup location further comprises:

4           creating said bulk delivered package at a retailer fulfillment site, said bulk delivered  
5 package containing at least one ordered item organized for a specific recipient;

6           determining one of a specified destination centralized pickup location and a destination  
7 local distribution hub for bulk delivery of said created bulk delivered package;

8           sorting and grouping for bulk delivery at said retailer fulfillment site said bulk delivered  
9 package based on said determined one of a specified destination centralized pickup location and  
10 a destination local distribution hub; and

11           delivering in bulk said bulk delivered package from said retailer fulfillment site to said  
12 determined one of a specified destination centralized pickup location and a destination local  
13 distribution hub.

14           25. The method according to claim 1, further comprising:

15           creating a bulk delivered CDC outbound package consisting of at least one item  
16 destined for a recipient at one of a specified destination centralized pickup location and a  
17 specified address;

18           submitting said bulk delivered CDC outbound package for pickup at a destination  
19 centralized pickup location; and

20           delivering said CDC outbound package in bulk to one of said specified destination  
21 centralized pickup location and a local distribution hub.

22           26. A method for efficient package creation comprising:

23           determining one of a specified destination centralized pickup location and a destination  
24 local distribution hub for delivery of at least one item destined for a recipient;

4 locating items destined to a specific recipient and one of said specified destination  
5 centralized pickup location and said local distribution hub from said items within a destination  
6 RDC, said items organized by a common item identifier; and

7 consolidating said located items originating from a plurality of retailers into a package,  
8 said package destined to said specific recipient and one of said specified destination centralized  
9 pickup location and said destination local distribution hub.

1 27. The method according to claim 26, further comprising:

2 delivering in bulk to an origination RDC, said items organized by said common item  
3 identifier from a retailer to fill an order destined for said recipient;

4 determining a destination RDC for said items based on a predefined relationship  
5 between a series of local markets served by a destination RDC and a local market of said  
6 determined one of a specified pickup location and a local distribution hub; and  
7 transporting said items from said origination RDC to said determined destination RDC.

8 28. A method for efficient package creation comprising:

9 delivering in bulk to an origination RDC, items organized by a common item  
10 identifier from a retailer to fill an order destined for a recipient;

11 determining a destination RDC for said delivered items based upon a destination  
delivery location of said order destined for said recipient;

transporting said items from said origination RDC to said determined destination  
RDC;

locating items destined to a specific recipient from said transported items within  
said destination RDC, said transported items organized by said common item identifier; and

consolidating said located items originating from a plurality of retailers into a  
package, said package destined for said specific recipient.



1 29. A system for efficient bulk package delivery for recipients, the system comprising:  
2 delivery means for delivering of said packages in bulk for a plurality of recipients in a  
3 single delivery stop to a destination centralized pickup location; and  
4 a means for randomly loading said bulk delivered packages into an automated system of  
5 storage locker bins.

1 30. The system according to claim 29, wherein said delivery means for delivering of  
2 said packages in bulk for recipients further comprises, delivery means for delivery of at least one  
3 item destined for a recipient.

1 31. The system according to claim 30, wherein said delivery means for delivering of  
2 said packages in bulk comprises, means for sorting at an origination RDC location, items  
3 received from a plurality of retailers delivered to said origination RDC location, said items  
4 destined for a plurality of said recipients, said items organized by a common item identifier.

1 32. The system according to claim 31, wherein said means for sorting said received  
2 items at said origination RDC location further comprises:  
3 identification means for identifying said received items to at least one of a destination  
4 centralized pickup location and a destination local distribution hub;  
5 identification means for identifying said received items to a destination RDC; and  
6 means for sorting and grouping said identified received items by said identified  
7 destination RDC, said identified received items organized by a common item identifier.

1 33. The system according to claim 32, wherein said means for delivering said  
2 packages in bulk comprises:  
3 transportation means for transporting said sorted and grouped items to said identified  
4 destination RDC;

means for sorting at said destination RDC said transported items by said one of a destination centralized pickup location and a destination local distribution hub;

means for creating at said destination RDC, said bulk delivered package by organizing said sorted items for a specific recipient, said sorted items being sorted by one of said destination centralized pickup location and said destination local distribution hub; and

transportation means for transporting in bulk said created bulk delivered package having said items organized for a specific recipient, to one of said destination centralized pickup location and said destination local distribution hub.

34. The system according to claim 33, wherein said means for creating said bulk delivered package at said destination RDC location further comprises, means for locating items destined to a specific recipient from items organized by said common item identifier.

35. The system according to claim 34, further comprising consolidation means for consolidating more than one of said located items originating from said plurality of retailers, destined to said specific recipient.

36. The system according to claim 35, further comprising means for receiving said located items associated with a single order from at least one fulfillment location, said fulfillment location being at least one of a retailer, a manufacturer, a merchant and a supplier.

37. The system according to claim 29, wherein said means for randomly loading said bulk delivered package into said automated system of storage locker bins comprises:

electronics for capturing electronically, an identifier for said bulk delivered package;  
and

means for associating said electronically captured identifier of said bulk delivered package with an electronically captured identifier of one of said storage locker bins within said

13 automated system of storage locker bins.

1 38. The system according to claim 37, further comprising, retrieval means for  
 2 retrieving said bulk delivered package created for said specific recipient from a storage locker  
 3 bin, said retrieval means having a computing means for authenticating an identity of said  
 4 recipient prior to at least one of revealing an identity of said storage locker bin and providing  
 5 access to said storage locker bin.

1 39. The system according to claim 30, further comprising:  
 2 means for creating a returns package consisting of at least one item from at least one of a  
 3 bulk delivered package retrieved by a recipient and a package delivered to a customer specified  
 4 address, said returns package destined for a retailer associated with said at least one item; and  
 5 delivery means for delivering in bulk, sorted and grouped created returns package to  
 6 returns facility of said associated retailer.

1 40. The system according to claim 39, further comprising means for submitting said  
 2 returns package for pickup at a destination centralized pickup location.

1 41. The system according to claim 30, further comprising:  
 2 means for creating a returns package consisting of at least one item from at least one of a  
 3 bulk delivered package retrieved by a recipient and a package delivered to a customer specified  
 4 address, said returns package destined for a retailer associated with said at least one item;  
 5 identification means for identifying a returns facility identifier and a returns local market  
 6 identifier for said returns package based upon an identifier of said retailer;  
 7 identification means for identifying a RDC identifier associated with said returns local  
 8 market identifier;

9 means for submitting said returns package for pickup at a destination centralized pickup  
10 location;

11 transportation means for transporting said submitted returns package from said  
12 destination centralized pickup location of returns package submission to a destination RDC  
13 associated with said destination centralized pickup location of returns package submission;

14 means for sorting and grouping at said associated destination RDC said transported  
15 returns package by said identified RDC identifier associated with said returns local market  
16 identifier for bulk delivery to an origination RDC associated with said identified RDC identifier;

17 transportation means for transporting said sorted and grouped returns package from said  
18 associated destination RDC to said associated origination RDC;

19 means for sorting at said associated origination RDC said transported returns package  
20 by said identified returns local market identifier of said returns package;

21 means for sorting and grouping at said associated origination RDC said sorted returns  
22 package by said identified returns facility identifier of said sorted returns package for bulk  
23 delivery to a returns facility associated with said associated returns facility identifier; and

24 delivery means for delivering in bulk said sorted and grouped returns package to said  
25 associated returns facility.

1 42. The system according to claim 29, wherein said means for randomly loading said  
2 bulk delivered package into said automated system of storage locker bins comprises, electronic  
3 circuitry and software for automatically triggering the dispatch of an electronic notification to  
4 said recipient of said bulk delivered package, said electronic notification having at least an  
5 identifier of said destination centralized pickup location.

1 43. The system according to claim 42, wherein said electronic circuitry and software  
2 for automatically triggering the dispatch of said electronic notification further comprises,  
3 circuitry and associated software for recording information necessary for billing at least one of a

customer who ordered an item of said bulk delivered package, said recipient and a retailer, said information including at least one of an order identifier, an ordering customer identifier, a recipient identifier, a customer identifier, a package identifier, a delivery date, a delivery time, a delivery notification date, a delivery notification time, a retrieval date and a retrieval time.

44. The system according to claim 42, wherein said electronic notification to said recipient comprises, at least one of a facsimile, an email, a telephone call, and a page.

45. The system according to claim 29, further comprising retrieval means for retrieving said bulk delivered package by said recipient through self-service.

46. The system according to claim 29, wherein said means for loading said bulk delivered package randomly into said automated system of storage locker bins further comprises, means for loading said bulk delivered package into any unoccupied storage locker bin within said automated system of storage locker bins, said automated system of storage locker bins having dimensions large enough to accept said bulk delivered package, said automated system of storage locker bins being configurable.

47. The system according to claim 29, wherein said delivery means for delivering said package in bulk to said destination centralized pickup location further comprises, a means for accommodating delivery of said package in bulk to said destination centralized pickup location from a plurality of different shippers.

48. The system according to claim 29, wherein said means for loading said bulk delivered package randomly into said automated system of storage locker bins further comprises, means for accommodating loading of said bulk delivered package into said automated system of storage locker bins from a plurality of different shippers.

1           49.    The system according to claim 29, wherein said delivery means for delivering said  
2 package in bulk to said destination centralized pickup location further comprises, means for  
3 creating said bulk delivered package at a retailer fulfillment site, said bulk delivered package  
4 containing at least one ordered item organized for a specific recipient.

1           50.    The system according to claim 49, wherein said delivery means for delivering said  
2 package in bulk to said destination centralized pickup location further comprises:

3               means for determining one of a specified destination centralized pickup location and a  
4 destination local distribution hub for bulk delivery of said bulk delivered package;

5               means for determining a destination RDC for said bulk delivered package;

6               transportation means for transporting said bulk delivered package from said retailer  
7 fulfillment site to an origination RDC;

8               means for sorting and grouping at said origination RDC said transported bulk delivered  
9 package by said determined destination RDC;

10              transportation means for transporting said bulk delivered package from said origination  
11 RDC to said determined destination RDC;

12              means for sorting and grouping for bulk delivery at said determined destination RDC  
13 said transported bulk delivered package by said determined one of said specified pickup location  
14 and said local distribution hub; and

15              delivery means for delivering said bulk delivered package in bulk from said determined  
16 destination RDC to said determined one of said specified pickup location and said local  
17 distribution hub.

1           51.    The system according to claim 29, wherein said means for delivering said bulk  
2 delivered package to said destination centralized pickup location further comprises:

3               means for creating said bulk delivered package at a retailer fulfillment site, said bulk  
4 delivered package containing at least one ordered item organized for a specific recipient;

5 means for determining one of a specified destination centralized pickup location and a  
6 destination local distribution hub for bulk delivery of said created bulk delivered package;

7 sorting means for sorting and grouping for bulk delivery at said retailer fulfillment site  
8 said bulk delivered package based on said determined one of a specified destination centralized  
9 pickup location and a destination local distribution hub; and

10 delivery means for delivering in bulk said bulk delivered package from said retailer  
11 fulfillment site to said determined one of a specified destination centralized pickup location and a  
12 destination local distribution hub.

1 52. The system according to claim 29, further comprising:

2 means for creating bulk delivered CDC outbound package consisting of at least one  
3 item destined for a recipient at one of a specified destination centralized pickup location and a  
4 specified address;

5 means for submitting said bulk delivered CDC outbound package for pickup at a  
6 destination centralized pickup location; and

7 delivery means for delivering said CDC outbound package in bulk to one of said  
8 specified destination centralized pickup location and a destination local distribution hub.

1 53. A system for efficient package creation comprising:

2 means for determining one of a specified destination centralized pickup location and a  
3 destination local distribution hub for delivery of at least one item destined for a recipient;

4 means for locating items destined to a specific recipient and one of said specified  
5 destination centralized pickup location and said local distribution hub from said items within a  
6 destination RDC, said items organized by a common item identifier; and

7 means for consolidating said located items originating from a plurality of retailers into a  
8 package, said package destined to said specific recipient and one of said specified destination  
9 centralized pickup location and said destination local distribution hub.

1           54.    The system according to claim 53, further comprising:  
2                delivery means for delivering in bulk to an origination RDC, said items organized by  
3                said common item identifier from a retailer to fill an order destined for said recipient;  
4                means for determining a destination RDC for said items based on a predefined  
5                relationship between a series of local markets served by a destination RDC and a local market of  
6                said determined one of a specified pickup location and a local distribution hub; and  
7                transportation means for transporting said items from said origination RDC to said  
8                determined destination RDC.

1           55.    A system for efficient package creation comprising:  
2                delivery means for delivering in bulk to an origination RDC, items organized by a  
3                common item identifier from a retailer to fill an order destined for a recipient;  
4                means for determining a destination RDC for said delivered items based upon a  
5                destination delivery location of said order destined for said recipient;  
6                transportation means for transporting said items from said origination RDC to said  
7                determined destination RDC;  
8                means for locating items destined to a specific recipient from said transported items  
9                within said destination RDC, said transported items organized by said common item identifier;  
10              and  
11              means for consolidating said located items originating from a plurality of retailers into a  
12              package, said package destined for said specific recipient.